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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/614,261      | 07/07/2003  | John Taboada         | 382/103             | 7790             |

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Dr. John Taboada  
12530 Elm Country  
San Antonio, TX 78230

EXAMINER

PERVAN, MICHAEL

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2629

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/614,261 | <b>Applicant(s)</b><br>TABOADA, JOHN |  |
|                              | <b>Examiner</b><br>Michael Pervan    | <b>Art Unit</b><br>2629              |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 18 January 2006.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1,3-6,9 and 12-25 is/are pending in the application.

4a) Of the above claim(s) 18-25 is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1,3-6,9 and 12-17 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All    b) ☐ Some    c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

|   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: _____ |
|---|--|

## **DETAILED ACTION**

### ***Specification***

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### **Content of Specification**

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.  
  
Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are

solved by the applicant's invention. This item may also be titled "Background Art."

- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if

an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (I) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

### ***Claim Objections***

2. Claim 12 is objected to because of the following informalities: it depends on canceled claim 10. For purposes of examination, claim 12 will depend on claim 9.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

Claim 12 recites the limitation "the lens and aperture" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-6, 9, 12-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman (US 2002/0158827) in view of Pelosi (US 6,424,410) in further view of Hunter et al (US 6,101,269).

In regards to claim 1, Zimmerman discloses (Figures 1 and 2) an apparatus for controlling the position of a cursor marker on a computer monitor screen (14) and selecting the computer action such as on-screen virtual button pushing, icon positioning and file actions such as opening or closing, comprising;

a headset (10) based on the computer user's head (Figure 1, paragraph 25, lines 1-3 and paragraph 28; as can be seen in Figure 1, the device (10) is being or on the user's head (12)), a microphone (20) with wireless transmitter (32b) and a wireless receiver (15) (Figure 2 and paragraph 32, lines 7-17; the antenna 32b transmits a signal wirelessly coming from device 10 to computer 15 which receives the signal wirelessly, therefore the microphone 20 attached to device 10 has wireless transmitter and receiver) conveying the spoken instructions (commands) of the operator into the microphone port of the computer (Figure 2, paragraph 26 and paragraph 32, lines 7-17; since the microphone receives spoken commands and microphones are connected to

microphone ports of computers, therefore spoken commands are conveyed to the microphone port of the computer).

Zimmerman does not disclose a headset having a small battery power source and a solid-state optical mouse sensor affixed to the side of the computer screen and positioned such that it receives the speckle.

Pelosi discloses a small battery power source (col. 8, lines 39-41) and a solid-state sensor affixed to the side of the computer screen and positioned such that it receives a pattern (col. 5, lines 10-23; it is inherent that the sensor is a solid-state since it is made of diodes and other solid-state devices. Also, the headset can use laser light).

It would have been obvious at the time of invention to modify Zimmerman to incorporate the teachings of Pelosi, having a battery source and having the sensor affixed to the side of the monitor and the head unit replace the gyroscopic sensor of Zimmerman, because it makes the device more portable since there is no plug and because light sensing is more accurate than gyroscopic sensing.

Zimmerman and Pelosi do not disclose a headset having a laser speckle or interference pattern generator affixed there onto projecting a laser speckle pattern generally onto the computer screen.

Hunter discloses a laser speckle or interference pattern generator (col. 2, lines 37).

It would have been obvious at the time of invention to modify Zimmerman and Pelosi with the teachings of Hunter, replacing the head unit of Pelosi with the laser



speckle generator, because it would enable illumination of the computer screen and sensor.

In regards to claims 3 and 17, Zimmerman discloses an apparatus which is programmed to understand through word (voice) recognition software, spoken audible commands (voice commands) corresponding to computer commands normally entered on the keyboard or launched by a virtual button push with a computer mouse button (paragraph 26).

In regards to claim 4, Zimmerman discloses a headset, which moves with the operator's head movement (Figure 1; since the device is mounted on the user's head, as can be seen from the drawing, the headset would move with the operator's head movement).

In regards to claim 5, Zimmerman and Hunter disclose a laser speckle pattern generator comprised of a low power solid-state laser projecting a beam into a fiber optic bundle or a holographic plate to produce a speckle pattern (Hunter, col. 2, lines 37-42; optical fibers usually come in bundles) with motion correlated to the motion of the operator's head (Zimmerman, Figure 1; since the device is mounted on the user's head, as can be seen from the drawing, the headset would move with the operator's head movement).

In regards to claim 6, Zimmerman discloses a microphone communicating the spoken commands by the computer operator to a wireless transmitter (Figure 2, paragraph 26 and paragraph 32, lines 7-17; since the device can command a computer by voice through voice recognition software and the device is connected to the

computer wirelessly, therefore the microphone must communicate the voice commands to a wireless transmitter in order for the commands to reach the computer).

In regards to claim 13, Zimmerman discloses a wireless transmitter and receiver of the Bluetooth type (paragraph 32, lines 13-17).

In regards to claim 14 and 15, they claim method steps paralleled to the structural means cited in claims 1, 4 and 3 respectfully and are therefore rejected for the same reasons, see MPEP 2112.02 *In re King* ("When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process").

7. Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Pelosi in view of Hunter et al and in further view of Agilent Technologies, Inc (Solid-State Optical Mouse Sensor with PS/2 and Quadrature Outputs).

In regards to claim 9, Zimmerman, Pelosi and Hunter do not disclose the solid-state optical mouse sensor being of the two-dimensional optical pattern autocorrelator type.

Agilent Technologies discloses the solid-state optical mouse sensor being of the two-dimensional optical pattern autocorrelator type (col. 2, Description; since it acquires two sequential images and then calculates the change in movement, it is therefore an optical autocorrelator because its correlating the two images together to determine movement).

It would have been obvious at the time of invention to modify Zimmerman, Pelosi and Hunter to incorporate the teachings of Agilent Technologies, replacing the monitor sensor of Pelosi, because the autocorrelator is more accurate (col.1, fourth bullet).

In regards to claim 12, Agilent Technologies discloses the sensor having the lens and aperture removed so as to permit the speckle or interference pattern to impinge on the complete surface (col. 2, Description; the sensor can be used with the lens HDNS-2100, but does not include the lens).

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Pelosi in view of Hunter et al and in further view of Koizumi (US 5,883,616).

In regards to claim 16, Zimmerman as modified does not disclose cursor motion control being accomplished by the process characteristic of the solid-state optical mouse sensor except that the left-right designation must be reversed electronically or in computer software.

Koizumi disclose cursor motion control being accomplished by the process characteristic of the solid-state optical mouse sensor except that the left-right designation must be reversed electronically or in computer software (col. 6, lines 13-22).

It would have been obvious at the time of invention to modify Zimmerman as modified incorporating the teachings of Koizumi because it makes a motion to the left cause the cursor to move left, otherwise the cursor would move right.

***Response to Arguments***

9. Applicant's arguments with respect to claims 1, 3-6, 9 and 13-17 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art (Pelosi US 2002/0175897) is deemed relevant since it is the divisional application to Pelosi (US 6,424,410).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pervan whose telephone number is (571) 272-0910. The examiner can normally be reached on Monday - Friday between 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MVP  
Mar. 27, 2006

AMR A. AWAD  
PRIMARY EXAMINER

